April 29, 1930. C. H. VEEDER 1,756,443

COUNTER

Filed March 7, 1928 2 Sheets-Sheet 1

Fig. 1.

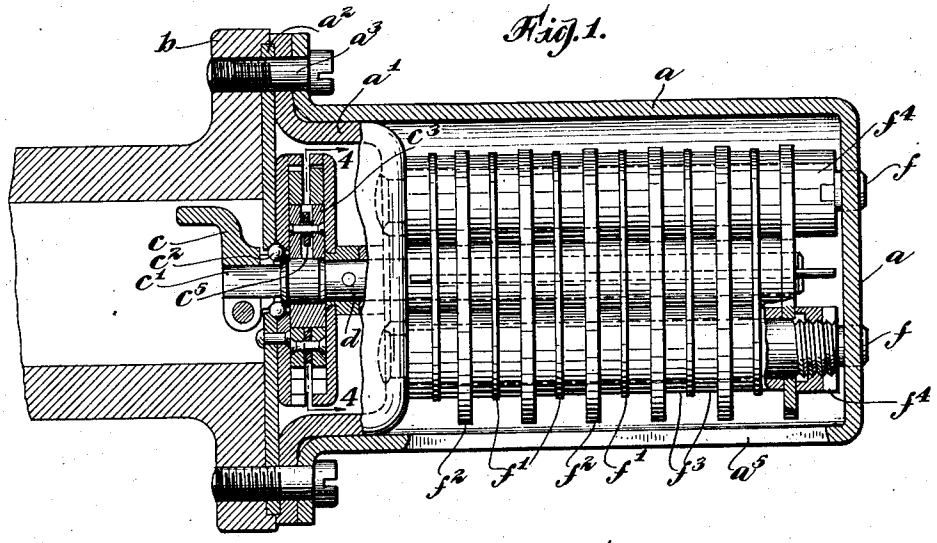
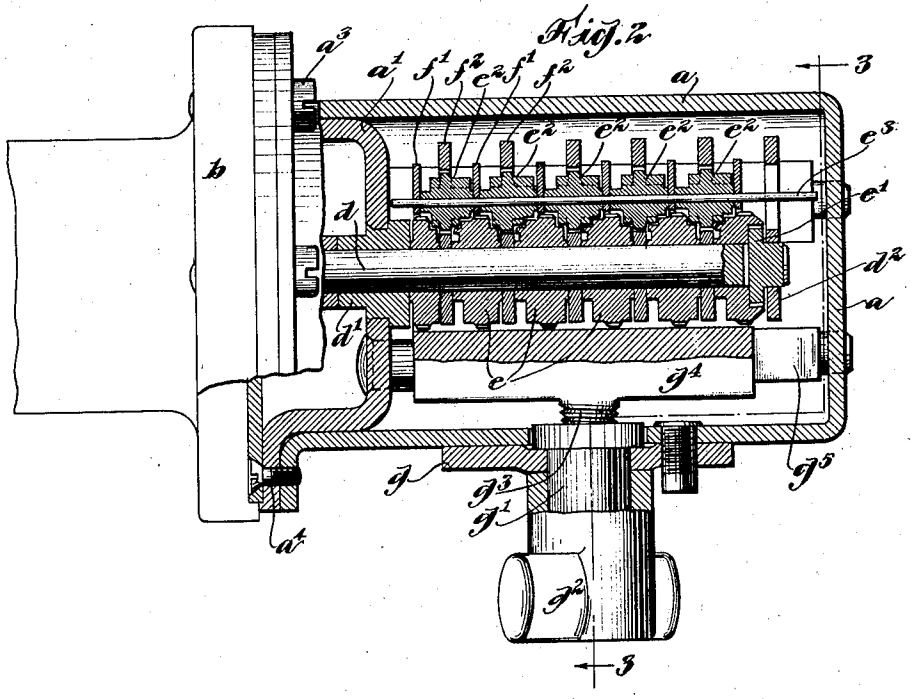


Fig. 2.



INVENTOR
Curtis Hussey Veeder
BY
Redding, Greeley, O'Shea & Campbell
ATTORNEYS

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Filed March 7, 1928 2 Sheets-Sheet 2

Fig. 3.

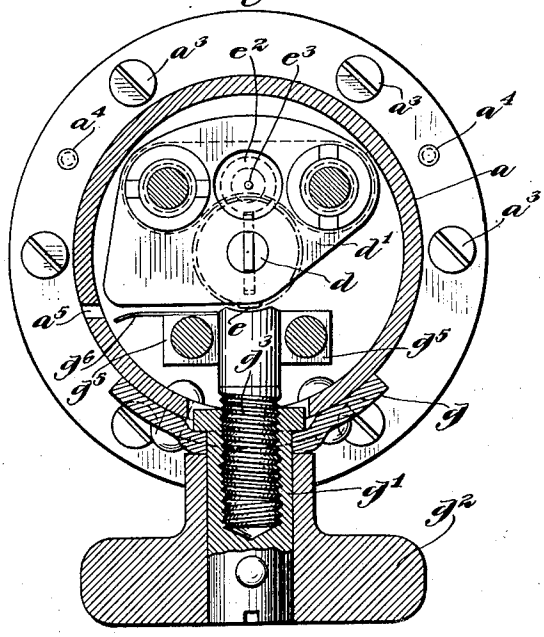
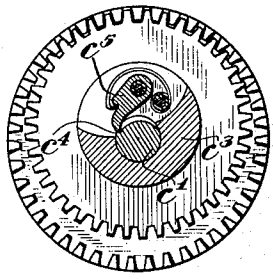


Fig. 4.



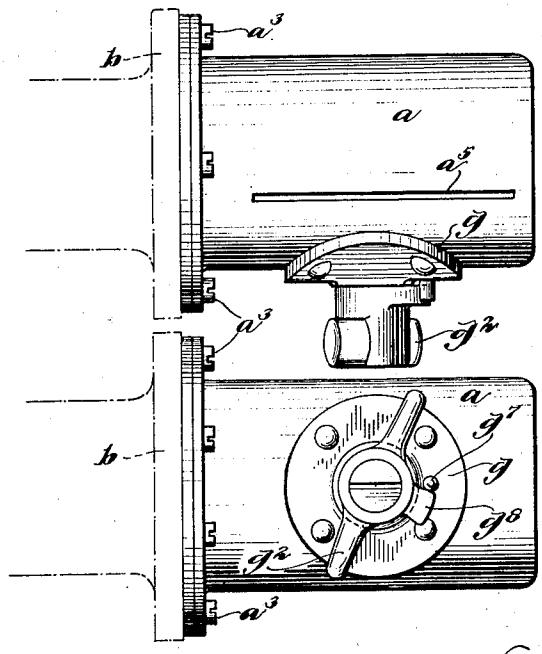


Fig. 5.

Fig. 6.

INVENTOR
Curtis Hussey Veeder
BY
Redding, Greeley, O'Shea & Campbell
ATTORNEYS

Patented Apr. 29, 1930 1,756,443

UNITED STATES PATENT OFFICE

CURTIS HUSSEY VEEDER, OF HARTFORD, CONNECTICUT, ASSIGNOR TO VEEDER-ROOT INCORPORATED, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT

COUNTER

Application filed March 7, 1928. Serial No. 259,719.

In the operation of some classes of machines, such, for example, as shoe stitching machines which are rented out on a basis of work done, it is desirable not only to register the number of stitches or other operations but also to make a record from time to time of the number of operations performed. It is, therefore, the object of the present invention to provide a registering mechanism or counter by means of which a record may be taken at any time which will show the total number of operations up to that time, while all parts of the mechanism are protected against improper manipulation. In accordance with the invention provision is made whereby a record card may be inserted in the register mechanism and, by the operation of a suitable plunger or platen, be brought into contact with number wheels in such manner that a record shall be made on the card. The invention is concerned not only with the devices for producing the imprint on the card but with the general construction of the register mechanism which adapts it particularly for its intended use, including the support of the number wheels and associated parts and the means whereby the number wheels are actuated by successive movement of some part of the machine to which the counter is applied. The several features of improvement will be more particularly explained hereinafter with reference to the accompanying drawings in which is illustrated an imprint counter or recording register in which the invention is embodied.

In the drawings—

Figure 1 is a top view, partly in horizontal section, illustrating an approved embodiment of the invention.

Figure 2 is a view of the same in vertical sectional elevation.

Figure 3 is a view in section on the plane indicated by the broken line 3—3 of Figure 2.

Figure 4 is a detail view in section on the plane indicated by the broken line 4—4 of Figure 1.

Figures 5 and 6 are respectively a view in elevation and an under side view of the improved counter, the scale of these two figures being less than that of the other figures of the drawings.

The register mechanism is supported within a flanged casing a which, with a flanged cup-shaped supporting plate a^1 and a flat plate a^2, may be secured by screw bolts a^3 to a suitable part b of the machine, the operations of which are to be registered. The several supporting members may also be secured together by screws a^4, the heads of which may be sealed. The casing a is formed at a^5 with a slot through which the card to receive the imprint of the number wheels may be inserted.

The rotating part of the machine of which the operations are to be registered and recorded cooperates with an arm e on a short shaft c^1 which is supported in a suitable ball bearing c^2. The shaft c^1 supports at the end, remote from the arm c, an eccentric c^3 which is rotated by the shaft c^1 through the medium of a notch c^4 in the shaft and a spring pressed pawl c^5 carried by the eccentric c^3, this construction providing that the eccentric shall be driven in one direction only, so that a reversal of the drive shaft c^1 will not cause the counter to subtract. The eccentric forms one element of a compound eccentric gearing of usual construction through which the main shaft d of the register mechanism, in alignment with the shaft c^1, is driven at a suitable reduction ratio, which, in the arrangement shown, is taken to be 1 to 1000. The shaft d is mounted near one end in a suitable bearing d^1, in the supporting plate c^1, and at the other end in a suitable bearing in a plate d^2. The number wheels e, of usual construction, but having raised characters, are mounted loosely on the shaft d and are driven from the main shaft through transmitting pinions e^2 in the usual manner, the transmitting pinions e^2 being mounted on a spindle e^3, and receiving motion in the usual manner, while the units number wheel is actuated directly from the shaft d by a key e^1. The counting mechanism is supported by two studs f, f which at one end are riveted to the plate a^1 and at the other end are supported in the outer end of the casing a. On the studs are strung a series of plates f^1, f^2 which support

the pinion shaft or spindle e^3 and the main shaft d, the plates being maintained at the proper distance by suitable distance pieces f^3. Binding devices, such as nuts f^4, threaded on the studs f, bind the structure firmly together and hold all parts rigidly in place, supporting the number wheels properly against the pressure of the platen.

Riveted to the bottom of the casing a is a plate g which supports rotatably a nut g^1. The latter, which may have secured to it an operating handle g^2, engages a threaded stem g^3 which carries at its upper end a platen g^4 which has its face properly shaped to conform to the characters on the number wheels e and has a length sufficient to cooperate with all of the number wheels of the series. The platen is guided in its movements by two squared studs g^5. Fixed in proper spaced relation with the slot a^5 and the platen is a guide plate g^6 which serves to guide the record card, inserted through the slot, to position between the platen and the number wheels, so that when the platen is pressed upwardly by the action of the nut g^1 the card is pressed against the number wheels and an impression taken. A stop g^7 may be carried by the plate g to cooperate with a lug g^8 on the handle g^2 to prevent excessive movement of the platen.

I claim as my invention:

1. In a recording register having register wheels and a recording platen, the combination of a supporting plate, a supporting casing, studs supported by said plate and said casing, a second supporting plate supported by the studs, a main shaft mounted in said supporting plates, said number wheels being mounted on the main shaft, means to actuate the number wheels, squared studs mounted in the first named supporting plate and casing, said platen being mounted between the studs and being movable toward and from the number wheels, and means to actuate the platen.

2. The combination of a main support, a supporting plate, a flanged and cupped supporting plate and a flanged casing, the flanges of the cupped supporting plate and of the casing overlapping the first mentioned plate and abutting one another, means to secure the plates and the casing to the main support, a drive shaft and a main shaft supported in alignment by said plates and casing, number wheels mounted on the main shaft, and means to actuate the number wheels, the main shaft number wheels and actuating mechanism being supported by the cupped supporting plate and the casing.

This specification signed this 27th day of February, A. D. 1928.

CURTIS HUSSEY VEEDER.